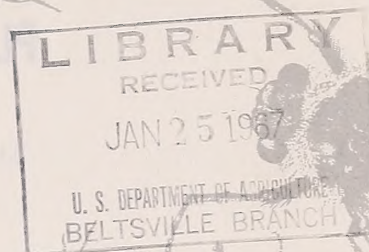


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Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

SPOTTED ALFALFA APHID is heavy in Mayes County, Oklahoma, and southeastern Kansas. Continued dry weather may cause buildup in Arkansas. Early populations of PEA APHID on alfalfa in California may indicate heavy infestations this season. (p. 29).

Report of disease and parasitism of EUROPEAN CORN BORER in Illinois. (p. 29).

CITRUS RED MITE was at highest level since 1958 on Florida citrus during December 1966. Expected to decrease and continue low until late March. A SNOW SCALE (*Unaspis citri*) heavier than any prior month in 16 years of record on same crop. (pp. 30, 31).

Detection

New State records included two WEEVILS in Wisconsin (p. 33) and a STRATIOMYID FLY from Hawaii (p. 34).

Special Report

- Status of European Chafer - 1966. (p. 35).

Reports in this issue are for week ending January 13 unless otherwise indicated.

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WEATHER BUREAU'S 30-DAY OUTLOOK

MID-JANUARY TO MID-FEBRUARY 1967

The Weather Bureau's 30-day outlook calls for temperatures to average below seasonal normals from the Rockies to the Appalachians and also over the southern plateau. Above normal temperatures are indicated for the Northwest as well as parts of Florida and New England, while near normal values are expected in unspecified areas. Precipitation is expected to exceed normal over southern border States from the southern plateau in the West to the Atlantic seaboard and also over the remaining east coast States. Western portions of the northern and central Plains are also expected to have above normal precipitation. Subnormal totals are called for over the Pacific Northwest, California and in the upper Mississippi Valley. Elsewhere near normal precipitation is indicated.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through the Superintendent of Documents, Washington, D. C. 20250. Price \$5.00 a year.

WEATHER OF THE WEEK ENDING JANUARY 16, 1967

HIGHLIGHTS: Near record snowfall hit southern Texas; weather unusually warm in northern Rockies; blizzard raging in northern Plains as the week ends.

PRECIPITATION: An unusually heavy snowfall, the second heaviest in history for the area, blanketed southern Texas on Monday, January 9. Depths reached 5-7 inches from near Cotulla and Three Rivers southward to Hebbronville while depths up to 3 feet were reported in northeastern Mexico. Also early in the week, northwesterly winds blowing across the Great Lakes, caused heavy snow squalls over a band about 10 miles wide in the lee of the Lakes. Many areas received 2-6 inches, with a few spots up to 10 inches. The northern Appalachians also received new snow, while shortly after midweek, another storm deposited fresh snow in upstate New York and northern New England. Rains along the gulf and Atlantic coasts totaled up to an inch or more early in the week, with additional falls approaching 0.50 inch over the weekend. The northern Pacific coast received 3-4 inches of rain, mostly during the latter half of the week, while heavy snow fell in the Cascades with depths above 5,000 feet increasing to 100-140 inches. Heavy snow also fell

Weather continued on page 33.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

SPOTTED ALFALFA APHID (Therioaphis maculata) - MISSISSIPPI - Very light, 2-3 adults per square foot, on alfalfa in Oktibbeha County. (Dinkins). ARKANSAS - Less evidence of reproduction than last week. Continued dry weather may result in buildup. (Boyer). OKLAHOMA - Continues heavy in alfalfa in Mayes County; ranged 10-15 per square foot of crown in Kiowa County. (Okla. Coop. Sur.). KANSAS - Ranged 150-200 per square foot in seedling alfalfa in Elk and Wilson Counties. (Simpson).

GREENBUG (Schizaphis graminum) - NEW MEXICO - Very light in Curry County wheat fields. (Mathews). KANSAS - Ranged 0-5 per linear foot on wheat in Neosho, Wilson, Elk and Greenwood Counties. None found in east-central district. (Simpson). ARKANSAS - Low in northwest area. (Boyer).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - ILLINOIS - Data collected on microsporidiosis for period 1961-1966 only indicates that disease occurs in O. nubilalis in most areas of State. Incidence heaviest in western and northern areas. Data insufficient to determine if disease is having any effect on rise and fall of borer populations. Data on Lydella sp. (a parasitic tachina fly) available for period 1944-1965. This parasite of O. nubilalis introduced into State and became established in the 1940's. From 1950 through 1958, Lydella sp. parasitized 50-75 percent or more of second-generation European corn borer larvae in some counties. Lydella sp. declined rapidly in 1959-1961; none found in State from 1962 to 1965. These data indicate lack of information on incidence of parasitism and disease of first-generation borers and on overwintered borers. Practically all available data are from fall collected borers. Studies will continue. (Petty, Jan. 6).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - OKLAHOMA - Larvae infesting 74 percent of dry cornstalks in 2 Harmon County fields. (Okla. Coop. Sur.).

WHEAT CURL MITE (Aceria tulipae) - MICHIGAN - Specimens collected in several southwest counties during November survey. This species is considered responsible for the kernel red stripe condition on corn that has been widespread throughout corn-growing area of Lower Peninsula since 1963. (Smith et al.).

SMALL GRAINS

GRAIN MITES - KANSAS - Penthaleus major averaged 15-20 per linear foot in most wheat in southeast area. Wheat samples from experiment station at Hays, Ellis County, almost entirely infested with Aceria tulipae. (Simpson).

AN APHID (Rhopalosiphum rufiabdominalis) - KANSAS - Ranged 2-6 per wheat plant in east-central and southeast districts. (Simpson).

FORAGE LEGUMES

PEA APHID (Acyrtosiphon pisum) - CALIFORNIA - Light on 10-acre alfalfa planting at Clovis, Fresno County. These early populations may indicate heavy infestations this season. (Cal. Coop. Rpt.). NEW MEXICO - Light to moderate on alfalfa near Ft. Sumner, De Baca County. (Mathews). KANSAS - Averaged 15-20 per square foot in most seedling alfalfa in southeast area. (Simpson). ARKANSAS - Lower on vetch than last week. (Boyer). MISSISSIPPI - Moderate, 20-30 adults and nymphs per square foot, on alfalfa in Oktibbeha County. (Dinkins).

ALFALFA WEEVIL (Hypera postica) - MISSISSIPPI - Larvae very light, 1 per square foot, on alfalfa in Oktibbeha County. (Dinkins).

CLOVER LEAF WEEVIL (Hypera punctata) - ARKANSAS - Occasional larva observed in vetch and alfalfa in northwest area. (Boyer).

COLE CROPS

APHIDS - FLORIDA - Populations high, 500+ per plant on unsprayed cabbage beginning to head at Sanford, Seminole County; Myzus persicae and Brevicoryne brassicae present. Sprayed plots free of aphids as are most commercial fields. (Greene, Jan. 6). CALIFORNIA - B. brassicae medium in 5 acres of cabbage in Clovis, Fresno County. (Cal. Coop. Rpt.).

CABBAGE MAGGOT (Hylemya brassicae) - CALIFORNIA - Larvae medium on roots of Chinese cabbage, turnips and rutabaga crops in Santa Maria, Santa Barbara County. (Cal. Coop. Rpt.).

LOOPERS - FLORIDA - Eggs of undetermined species totaled 36 on December 30, and 32 on January 6, per 100 cabbage plants. Larvae increased from 32 on December 30 to 48 on January 6; only one pupa found. (Greene, Jan. 6).

DECIDUOUS FRUITS AND NUTS

HICKORY SHUCKWORM (Laspeyresia caryana) - ALABAMA - Survival of full-grown larvae high in shucks under pecan trees in central area; 1-2 larvae per shuck not uncommon under untreated trees. (McQueen).

GIANT BARK APHID (Longistigma caryae) - TEXAS - Heavy on pecan tree near Taylor, Williamson County. This is unusual situation since peak populations usually occur during fall months. (Thompson).

CITRUS

Quarterly Citrus Insect and Mite Outlook in Florida - January through March - This outlook is based on the assumption that weather beyond the period of the current U. S. Weather Bureau's 30-day outlook will be normal. Therefore, the forecasts given below cannot be viewed with the same degree of confidence as those in the "Citrus Insect and Disease Summary" usually released twice each month.

CITRUS RUST MITE (Phyllocoptruta oleivora) expected to decrease gradually until mid-March; then increase. Mites will occur in normal moderate abundance during this period, but very few infestations will be destructive after January. CITRUS RED MITE (Panonychus citri) expected to decrease to normal low level after mid-January, then continue low until late March when buildup will be evident on young trees in scattered groves. Slight increase of TEXAS CITRUS MITE (Eutetranychus banksi) expected in January and late March. Population will be low throughout period; very few heavy infestations expected. SIX-SPOTTED MITE (Eotetranychus sexmaculatus) expected to be present in destructive numbers through March. GLOVER SCALE (Lepidosaphes gloverii) slightly more numerous than average and at moderate to high level. PURPLE SCALE (L. beckii) will continue at normal low to moderate abundance. YELLOW SCALE (Aonidiella citrina) expected to increase gradually and be more numerous than average. BLACK SCALE (Saissetia oleae) will increase through January and then decrease. Although population expected to be in the low range, it will be higher than normal. Unaspis citri infestations will spread and intensify. APHIDS will become abundant early in March. (W. A. Simanton).

Citrus Insect Situation in Florida - End of December - CITRUS RUST MITE infested 60 percent of groves (norm 57 percent); 41 percent economic (norm 38 percent). Population recently dropped from high range and is slightly above normal levels of abundance for year end on both leaves and fruit. Little change expected. Important infestations will occur in all districts. Highest districts, west, south, and north. CITRUS RED MITE infested 45 percent of groves (norm 37 percent); 19

percent economic (norm 10 percent). Population increased in late November and by mid-December was at highest December level since 1958. Slight increase expected from current moderate level. All districts will have few important infestations. Highest districts, west and north. TEXAS CITRUS MITE infested 34 percent of groves (norm 39 percent); 10 percent economic (norm 16 percent). Population increased but is still below normal December level. Slight increase expected in January but only scattered infestations will be important. Highest districts, west and north. GLOVER SCALE infested 76 percent of groves; 11 percent economic. Population is above average and in moderate range. Slight increase expected. Highest districts, central and east. PURPLE SCALE infested 75 percent of groves; 8 percent economic. Population normal and in moderate range. Little change expected. Highest district east. CHAFF SCALE (Parlatoria pergandii) infested 48 percent of groves; 4 percent economic. Population below normal and in low to moderate range. Little change expected. Highest district east. YELLOW SCALE infested 66 percent of groves; 12 percent economic. Population above average and in moderate range. Little change expected. Highest districts, east and central. BLACK SCALE infested 35 percent of groves; 13 percent economic. Population increased to normal level for December. Further increase will occur unless subfreezing weather slows development, but infestations not expected to be important in winter. Unaspis citri infested 8 percent of groves; 3 percent economic. This scale is present in more survey groves and infestations are heavier than in any prior month in 16 years of record. WHITEFLY larvae will be moderately abundant on leaves but adults and eggs will be scarce until March. (W. A. Simanton (Citrus Expt. Sta., Lake Alfred, Fla.)).

ARMORED SCALES - FLORIDA - Unaspis citri continues to be problem on various types of citrus nursery stock at several localities in Orange and Lake Counties. (Simpson et al., Dec. 29). All stages of Lepidosaphes gloverii generally infesting 30 percent of 2,000 citrus nursery plants at Clermont, Lake County. (Henderson, Dec. 29).

CITRUS MITES - FLORIDA - Phyllocoptruta oleivora and Panonychus citri adults infested 50 percent of 10,000 sour orange nursery plants at Riverview, Hillsborough County. (Simmons, McFarlin, Dec. 21). Eutetranychus banksi adults infested 90 percent of 4,500 sweet orange nursery trees at Bartow, Polk County. (Schmidt, Skipper, Dec. 28).

ORNAMENTALS

DOGWOOD BORER (Thamnosphenia scitula) - ALABAMA - Larvae numerous under bark and feeding on cambium layer of ornamental dogwood trees in central area. Some feeding by flickers observed. Larvae 2-10 on larger trees. (McQueen).

PEACH TREE BORER (Sanninoidea exitiosa) - ALABAMA - Larval feeding at and below ground line on peach, laurelcherry and flowering peach during past 2 weeks of warm, balmy weather caused considerable amount of gum residue to accumulate around injured bark. (McQueen).

ARMORED SCALES - FLORIDA - Chrysomphalus aonidum severely infested 85 percent of 100 coontie (Zamia floridana) at nursery in Sanford, Seminole County. (Kipp, Dec. 20). Fiorinia theae severely infesting nearly all of 75 camellia plants at Clermont, Lake County. (Henderson). Gymnaspis aechmeae severe on leaves of 90 percent of 175 bromeliads and 50 percent of 675 orchids at a "gardens" in Groveland, Lake County. (Henderson, Dec. 29). All stages of Pinnaspis strachani moderate on 35 percent of 2,000 hibiscus nursery plants at Davie, Broward County. (Shirah, Jan. 3).

GREENHOUSE ORTHEZIA (Orthezia insignis) - CALIFORNIA - Nymphs and adults heavy on gardenia plants at San Diego, San Diego County. (Cal. Coop. Rpt.).

MEALYBUGS (Pseudococcus spp.) - CALIFORNIA - P. obscurus nymphs and adults medium on azalea nursery stock at San Marcos, San Diego County. P. microcirculus medium on orchids in an orchid house at Menlo Park, San Mateo County. (Cal. Coop. Rpt.).

NATIVE HOLLY LEAF MINER (Phytomyza illicicola) - CALIFORNIA - Medium on Ilex vomitoria nursery stock in Valley Center, San Diego County. (Cal. Coop. Rpt.).

A EURYTOMID (Eurytoma sp.) - FLORIDA - Seriously damaged leaves of orchid plants at Orlando, Orange County. (Crews, Holley, Dec. 20).

FOREST AND SHADE TREES

A GRASSHOPPER (Dendrotettix quercus) - MICHIGAN - Adults collected from Lake and Newaygo Counties during late August. Few white oak trees in area were defoliated. Infestation was reported on nursery stock in Wayne County several years ago, but the 1966 infestation is first noted during recent years. (Flink, Cantrall).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - CALIFORNIA - Heavy on Monterey pine trees in Gilroy, Santa Clara County. (Cal. Coop. Rpt.).

MAN AND ANIMALS

TICKS - OKLAHOMA - Tick counts from white-tailed deer similar to last year at check stations in Cherokee, Muskogee, McIntosh, Sequoyah, Adair, Mayes, Delaware and Tulsa Counties as follows: Total of 1,179 ticks; 90.3 percent Ixodes scapularis, 6.1 percent Dermacentor albipictus, 3.5 percent Amblyomma americanum and 0.1 percent Amblyomma maculatum. (Okla. Coop. Sur.).

CATTLE LICE - MISSISSIPPI - Heavy on beef and dairy cattle in Oktibbeha County. (Dinkins).

HOG LOUSE (Haematopinus suis) - OKLAHOMA - Heavy on hogs in Ottawa County. (Okla. Coop. Sur.).

A LOUSE FLY (Stilbometopa impressa) - CALIFORNIA - Heavy populations infesting quail in San Andreas, Calaveras County. (Cal. Coop. Rpt.).

HOUSE FLY (Musca domestica) - MISSISSIPPI - Moderate in heated chickenhouses containing caged layers in several southern counties. (Dinkins).

MOSQUITOES - LOUISIANA - Larval collections in Jefferson Parish contained: Aedes vexans, Culex pipiens quinquefasciatus, Culex salinarius, and Culiseta inornata. Mosquitoes averaged 2.8 per night in 20 light traps reporting throughout parish. Dominant species were Culex salinarius and Culiseta inornata. (Stokes).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Moderate on cattle and light on horses in Comanche County. (Okla. Coop. Sur.).

SCREW-WORM (Cochliomyia hominivorax) - No cases reported in U. S. January 8-14. Total of 145 cases reported in portion of Barrier Zone in Republic of Mexico as follows: Sonora 68, Chihuahua 12, Coahuila 3, Nuevo Leon 6, Tamaulipas 5, Baja California 9, Territorio sur de Baja California 42. One case reported from Mexico south of the Barrier Zone. Barrier Zone is area where eradication operations underway to prevent establishment of self-sustaining population in U. S. Sterile screw-worm flies released: Texas 11,386,250, Arizona 100,000, California 1,616,000, Mexico 83,248,000. (Anim. Health Div.).

FEDERAL & STATE PLANT PROTECTION PROGRAMS

CARIBBEAN FRUIT FLY (Anastrepha suspensa) - FLORIDA - Total of 381 adult specimens trapped in Dade County and 3 in Manatee County during last week of December. Early in January adults were trapped in small numbers at Sarasota, Sarasota County; 37 adults were trapped at Ft. Pierce, St. Lucie County, January 6. Three larvae collected from guava at Sarasota January 3. (Hiatt).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - ALABAMA - Mounds constructed during early fall throughout infested area of State appear taller than usual as grass, weeds and other growth disappear with midwinter conditions and increased foraging of livestock. (McQueen).

WHITE GARDEN SNAIL (Theba pisana) - CALIFORNIA - Heavy adult populations infesting roots of ice-plants in Manhattan Beach, Los Angeles County. Eradication treatment underway. (Cal. Coop. Rpt.).

Weather continued from page 28.

in the northern mountains in Colorado. On Monday, January 16, the second blizzard of 1967 moved across the northern Great Plains to the Great Lakes. Winds gusted to more than 50 m.p.h., and visibility was reduced to near zero in some places. Wisconsin and Minnesota reported many roads blocked by one to two feet of drifting snow. It was a dry week in the Corn Belt, and dry weather continued from the Southwest to the southern Great Plains.

TEMPERATURE: Early in the week, icy northwesterly winds brought subzero temperatures to the northern Great Plains as far south as northern Missouri, and freezing temperatures to the northern portions of the Gulf States. Waco, Texas, registered 22°. At midweek, mild Pacific air flowed eastward across the Rockies into the northern Plains and afternoon temperatures in the 40's (15° or so above normal) were common east of the Continental Divide in Montana and Wyoming, due to Chinook winds 50-60 m.p.h. Southerly winds brought mild temperatures to the central Plains and Ohio River Valley. As the week ended, the second blizzard of 1967 brought bitter cold from the Dakotas to Michigan. Temperatures averaged cooler than normal from western Colorado southward to Mexico and from Texas eastward to South Carolina and northeastward to central Pennsylvania. Most of the Florida Peninsula and the northern half of the Nation averaged warmer than normal, with the northern Rockies averaging 10-18° warmer than normal. (Summary supplied by Environmental Data Service, ESSA).

INSECT DETECTION

A DUNG BEETLE (Aphodius bicolor) - FLORIDA - One adult collected in dung in a water oak hammock at Cedar Key, Levy County, by L. O'Berry, January 7, 1967. This is second specimen in the Florida State Collection of Arthropods. Det. by R. E. Woodruff. (Fla. Coop. Sur.).

New State Records

BLUEGRASS BILLBUG (Sphenophorus parvulus) - WISCONSIN - Collected in Dane, Racine, Rock and Walworth Counties September 10, 1965, and July 13 and 21, 1966. Det. by R. E. Warner. (Wis. Ins. Sur.).

A WEEVIL (Sitona scissifrons) - WISCONSIN - Taken on alfalfa in Dane, Grant, Rock and Walworth Counties, July and August 1966. Det. R. E. Warner. (Wis. Ins. Sur.).

A STRATIOMYID FLY (Gobertina picticornis) - HAWAII - Collected in Manoa Valley, Oahu, during October 1965. Det. by M. T. James. (p. 34).

HAWAII INSECT REPORT

New State of Hawaii Insect Records - Two females of a STRATIOMYID FLY (Gobertina picticornis) were collected at light during October 1965 in Manoa Valley, Oahu. This species (subfamily Pachygastrinae) previously reported only from Africa. Many Nearctic Pachygastrinae larvae live under bark of dead trees; this species may have same habit. Det. by M. T. James. (Vockeroth).

Tomatoes, Beans, Cucumbers - On Oahu, GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) medium to heavy on Snap beans and tomatoes in Nanakuli, Waianae and Makaha and medium on cucumbers and snap beans in Waialua. Rains and strong winds hampered spray operations. (Yamamoto, Funasaki).

Cole Crops - IMPORTED CABBAGEWORM (Pieris rapae) heavy in one acre of cabbage in Pulehu, and light in backyard plantings of broccoli in Puunene, Maui. (Miyahira).

Fruits and Nuts - A BARK BEETLE (Xylosandrus compactus) heavily infested Governors plum (Flacourtia indica) and lightly infested Spanishlime (Melicocca bijuga) on experimental farm at Hilo, Hawaii Island. Found in 30 different species of plants growing on and adjacent to experimental farm to date. Surveys at State Nursery in Hilo show medium to heavy infestations in potted plants of mahogany, custard-apple and nance (Byrsonima crassifolia). Heaviest infestation noted on custard-apple. (Yoshioka). COCONUT LEAF ROLLER (Hedylepta blackburni) larvae heavy on young coconut trees on military base at Kekaha, Kauai. Some trees sustaining 100 percent leaf damage. (Au). An ARMORED SCALE (Phenacaspis cockerelli) medium to heavy on kukui (Aleurites moluccana) and mango trees in Waianae, Oahu; most on dorsal surface of leaves. (Suzukawa).

Ornamentals - Medium to heavy adult populations of ORCHID WEEVILS (Orchidophilus spp.) damaged young dendrobium orchids in Hilo and Kainaliu. (Yoshioka).

Man and Animals - Total of 462 Aedes vexans nocturnus and 8,820 Culex pipiens quinquefasciatus taken in light trap on Oahu operated by Mosquito Control Branch, Department of Health. Culex spp. counts highest in Waianae and Nanakuli, Haleiwa, Ewa and windward side of island. Aedes spp. counts remained low in all areas. (Haw. Ins. Rpt.).

Beneficial Insects - Medium to heavy larval populations of a NOCTUID MOTH (Hypena strigata) caused 50-60 percent defoliation of lantana on Kauai from Lihue to Mana. (Au).

Miscellaneous Insects - Heavy larval population of a NOCTUID MOTH (Achaea janata) observed on buildings after causing almost complete defoliation to castor beans at Pukalani, Maui. (Miyahira).

LIGHT TRAP COLLECTIONS

FLORIDA - Sanford - 12/28/66 and 1/3/67, 1 light trap - Black cutworm (Agrotis ipsilon) 8, granulate cutworm (Feltia subterranea) 21, corn earworm (Heliothis zea) 2, yellow-striped armyworm (Prodenia ornithogalli) 4, cabbage looper (Trichoplusia ni) 2. Gainesville - 1/11, 1 light trap - Black cutworm 2, armyworm (Pseudaletia unipuncta) 1, yellow-striped armyworm 3. SOUTH CAROLINA - Charleston - 1/2-8, 1 BL, temp. 31-69°, precip. 3.52 - Armyworm 2, yellow-striped armyworm 2, black cutworm 1, granulate cutworm 1. TEXAS - Brownsville - 12/31-1/6, 2 BL, temp. 33-77°, precip. 0.09 - Black cutworm 59, salt-marsh caterpillar (Estigmene acrea) 2, granulate cutworm 78, variegated cutworm (Peridroma saucia) 23, yellow-striped armyworm 66, armyworm 82, beet armyworm (Spodoptera exigua) 18, fall armyworm (S. frugiperda) 6, cabbage looper 7. Brownsville - 1/7-13, 2 BL temp. 33-68°, precip. 1.56 - Black cutworm 28, salt-marsh caterpillar 4, granulate cutworm 37, tobacco budworm (Heliothis virescens) 1, corn earworm 2, variegated cutworm 3, yellow-striped armyworm 85, tobacco hornworm (Manduca sexta) 1, armyworm 35, beet armyworm 10, cabbage looper 2.

Status of European Chafer - 1966

European chafer (*Amphimallon majalis*) was first recorded in North America when grubs were collected in Wayne County, New York, during May 1940. The chafer was probably first introduced with plants from Europe sometime during the late 1920's or early 1930's. Since the original find, this scarab has been found in 31 additional counties in New York, two counties in New Jersey, two in Connecticut, one in West Virginia, four in Pennsylvania, four in Massachusetts, and one county in Ohio. The pest also occurs in Canada near Niagara Falls and at other locations in the Province of Ontario.

Damage by European chafer is caused by larvae feeding on plant roots. Larvae have been reported damaging lawn and pasture grasses, including bentgrass, ryegrass, and timothy in New York. White clover and ladino clover are also damaged. Winter wheat is a preferred host, and heavy populations may occur on oats, rye, and barley. Larval damage occurs on golf courses and in parks, cemeteries, and pastures, as well as in lawns.

Natural spread of European chafer is comparatively slow. During their brief life span, adults make an average of five mating flights which are short by comparison with some other species. Results of flight studies, however, indicate a theoretical flight distance of 3-4 miles could be traveled during the life cycle. Any long-distance spread of this chafer that has occurred, most likely is the result of movement of infested soil, plant material or other carriers, including various conveyances. Under State and Federal quarantine regulations, restrictions are placed on the movement, from designated regulated areas, of plants with roots, soil, grass sod, used machinery and equipment, other potential host articles and conveyances presenting hazards of spreading European chafer.

A survey was conducted from late May through July 1966 in the Northeastern States. In Connecticut, European chafer infestation continued active in Berlin, Hartford County, and in Meriden, New Haven County, with some local spread noted. The chafer was recorded for the first time in Massachusetts on June 27, 1966, at Malden. Subsequent survey revealed additional infestation in six towns in Middlesex County, three towns in Essex County, three towns in Suffolk County, and in one town in Worcester County.

Survey for European chafer in New Jersey resulted in the finding of three new infested sites. Two of the sites were in Bayonne, Hudson County, and the other was located in Newark, Essex County. These sites were in close proximity to areas previously found infested and might be considered as extensions. Survey conducted in counties other than Hudson and Essex proved negative.

The only known infestation of this chafer in Pennsylvania prior to June 1966 was in Erie County. Survey since that date revealed infestations in Bradford, Luzerne, and Lehigh Counties. Extensions of infestations were detected in Erie County beyond the treated area. The Bradford County infestation was found in and around the railroad yards in Sayre, and the light infestation in Luzerne County was in the Coxton railroad yards. The infestation in Lehigh County was near the downtown section of Allentown in a railroad-industrial complex.

During the 1966 survey in New York, European chafer was recorded for the first time in Jefferson, Bronx, Montgomery, Schenectady, and Orleans Counties. Extensions of previously determined infestations were recorded in Cayuga, Chemung, Genesee, Livingston, Madison, Oswego, Schuyler, Onondaga, and Yates Counties.

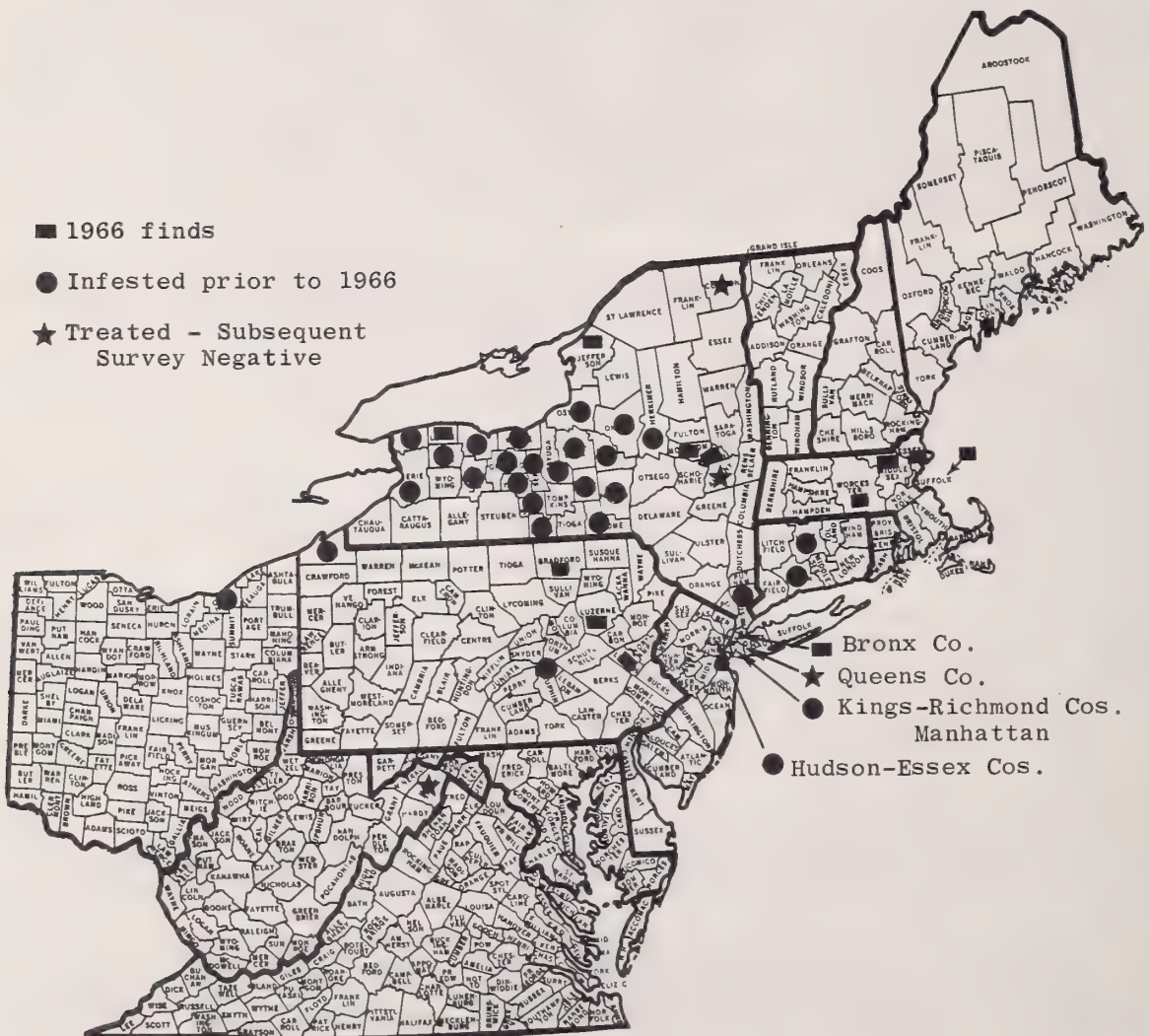
In addition to the operations described in the foregoing, appraisal investigations were made at selected points within the regulated area. The objective was to better evaluate conditions of infestation and to determine hazards of spread to outlying areas. Rail and other transportation centers were given primary consideration in this effort.

Surveys were negative in other Eastern States, including West Virginia, where particular attention was given to the previously infested area at Capon Bridge.

In Ohio, European chafer was first detected June 28, 1965, in Cleveland, Cuyahoga County. A total of 24 chafers was taken in seven traps during the year. Survey in 1966 showed the infestation remained light with 37 chafers being taken in one trap of 106 traps used in Cuyahoga County. No chafers were taken in any of ten other counties where traps were used in either 1965 or 1966.

During calendar year 1966, soil treatment was applied to a total of 6,848 acres in the Northeastern States as follows: New Jersey 1,210; New York 63; Pennsylvania 5,286; and Massachusetts 289. In Ohio, 2,303 acres were soil treated.

Status of European Chafer - 1966



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